UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/465,318	12/17/1999	INDRANIL BOB TAPADAR	71493-649	8752

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ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 November 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18-29 and 31-44* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18-29 and 31-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This action is in response to the communication filed on November 4, 2004.

2.   Claims 1-16, 18-29 and 31-44 are pending in this Office Action.

3.   The applicant's arguments with respect to claims 1-16, 18-29 and 31-44 have

been fully considered but they are not deemed to be persuasive. For examiner's

response to the applicant's arguments or comments, see the detailed discussion in the

Response to the Arguments section.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-6, 12-16, 22-29, 33-38 and 39-44 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Fujino et al. (US 5,436,899) in view of Kanerva et al. (US

5,793,744).

As per claim 1, Fujino teaches, "a method of transmitting comprising":

"detecting the start of an information segment being generated in real-time" (Fig.

17, element 51(VDET), here voice detector detect voice as the start of information

segment at real time, because the communication take place in real time);

"editing and buffering the information segment or a first representation thereof to produce a second representation" (col. 13, lines 18-36, here redundant bits and/or silence part are discarded or compressed as editing the information segment and by doing that it produces a second representation of the input signal; col. 25, lines 12-48 shows a buffering after the multiplexing)";

"whereby the editing and buffering is done to compensate for transmission resource allocation delays" (col. 34, lines 46-65, shows a total delay time is reduced).

Fujino teaches, "they are ready for transmission, the speed difference absorption buffer 142, is used as a transmission holding buffer" (col. 25, lines 12-48).

Fujino does not explicitly teach, "after transmission resources have been allocated, starting to transmit the second representation, in a multiple access system". However, Kanerva teaches, "after transmission resources have been allocated, starting to transmit the second representation, in a multi-access system" (Abstract, col. col. 9, lines 1-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Kanerva's teaching in the invention of Fujino because Kanerva teaches his invention introduce to reduce transmission power consumption, less temperature problems and simpler timing of reception (col. 4, lines 15-22).

As per claim 2, Fujino teaches, "wherein editing and buffering comprises editing and then buffering" (Fig. 35, element 140 (PAD) as buffer is comprises after element 138 (cod) as editing).

As per claim 3, Fujino teaches, "wherein editing is done on the information segment to produce a shortened information segment" (col. 13, lines 18-36, here discarding redundant bits and compressing silent to produce a shortened information segment).

As per claim 4, Fujino teaches, "wherein editing is done on the first representation which is a framed version of the information segment to produce a shortened information segment" (col. 12, lines 58-67, particularly reads on "a method for determining the discard in the current transmission frame according to the past discarding history").

As per claim 5, Fujino teaches, "wherein buffering is done on the shortened information segment to produce the second representation" (col. 25, lines 12-48, here buffering is done on the shortened information segment to produce packets as second representation).

As per claim 6, Fujino teaches, "wherein buffering is done on a frame version of the shortened information segment to produce the second representation" (col. 25, lines 12-48, here packets are forms on a frame version of the shortened information).

As per claim 12, Fujino teaches, "wherein upon detecting the start of the information segment, the method further comprises immediately requesting transmission resources to transmit the information segment" (col. 14, lines 47-62, particularly reads on "a call detector (CDET) 46 for detecting a call through monitoring by SS and SR signals").

As per claim 13, Fujino teaches, "wherein editing the information segment to produce a shortened information segment comprises time compressing the information segment" (col. 13, lines 18-36, since redundant bits and silences are compressed, therefore a time compressing the information segment is achieved).

As per claim 14, Fujino teaches, "wherein time compressing the information segment comprises removing repetitions and/or short pauses present in the segment" (col. 13, lines 18-36, "repetitions" reads on "redundant" and "short pauses" reads on "silent").

As per claim 15, Fujino teaches, "wherein before transmitting the second representation, the method further comprises passing the second representation through a frame erasure concealment unit to prevent corruption" (col. 13, lines 18-36, particularly reads on "discarding supplementary bits necessarily deteriorates sound quality, but permits transmission of core bits, thus ensuring the minimum sound quality provided by core bits").

As per claim 16, Fujino teaches, "wherein before transmitting the second representation, the method further comprises placing the second representation in one or more packets for transmission" (col. 25, lines 35-48, packets are transmitted).

As per claim 22, Fujino teaches, "wherein the information segment is a speech segment" (col. 7, lines 52-67, a voice coder is used for a speech segment).

As per claim 23, Fujino teaches, "wherein editing the framed version of the information segment to produce a shortened information segment comprises removing

redundant frames" (col. 13, lines 18-36, here discarding redundant bits and

compressing silent to produce a shortened information segment).

As per claim 24, Fujino teaches, "wherein removing redundant frames comprises

removing frames which contain repetitions and/or short pauses" (col. 13, lines 18-36,

"repetitions" reads on "redundant" and "short pauses" reads on "silent").

As per claim 25, Fujino teaches, "wherein before transmitting the second

representation, the method further comprises passing the second representation

through a frame erasure concealment unit to prevent corruption" (col. 13, lines 18-36,

particularly reads on "discarding supplementary bits necessarily deteriorates sound

quality, but permits transmission of core bits, thus ensuring the minimum sound quality

provided by core bits").

As per claim 26, Fujino teaches, "wherein before transmitting the second

representation, the method further comprises placing the second representation in one

or more packets for transmission" (col. 25, lines 35-48, packets are transmitted).

As per claim 39, Fujino teaches, "monitoring a state of a buffer containing the

information segment or the first representation and performing the editing so that the

buffer does not overflow" (Fig. 59 A, element Buffer RAM).

As per claim 40, Fujino teaches, "performing the editing at least long enough to

compensate for a resource acquisition time" (col. 7, lines 43-51).

As per claim 43, Fujino does not explicitly teach, "requesting the transmission

resources form the multi-access system and receiving a resource allocation from the

multi-access system after the resource allocation delay". However, Kanerva teaches,

"requesting the transmission resources form the multi-access system and receiving a

resource allocation from the multi-access system after the resource allocation delay"

(col. 6, lines 1-25). Therefore, it would have been obvious to one of ordinary skill in the

art at the time of the invention to use Kanerva's teaching in the invention of Fujino

because Kanerva teaches his invention introduce to reduce transmission power

consumption, less temperature problems and simpler timing of reception (col. 4, lines

15-22).

As per claims 27-29, 33-38, 41, 42 and 44, they are interpreted and thus rejected

for the same reasons set forth in the rejection of method claims 1-6, 12-16, 22-26, 39,

40 and 43 because claims 27-30 and 33-38 have similar scope.

6.   Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Fujino et al. (US 5,436,899) in view of Kanerva et al. (US 5,793,744) as applied to claim

1 above, and further in view of Rappaport (Wireless Communications Principles and

Practice).

As per claims 7, 8, 10 and 11, Fujino does not explicitly teach:

"wherein buffering and editing comprises buffering and then editing";

"wherein buffering is done on the information segment to produce a buffered

information segment";

"wherein editing is done on a buffered information segment to produce a

shortened information segment";

"wherein editing is done on the first representation which is a framed version of the buffered information segment to produce shortened information segment";

"wherein editing is done on the first representation which is a framed version of the buffered information segment to produce shortened information segment".

However, Rappaport teaches:

"wherein buffering and editing comprises buffering and then editing" (see For example Figs 7.6, 7.9 and 7.10);

"wherein buffering is done on the information segment to produce a buffered information segment"(see For example Figs 7.6, 7.9 and 7.10);

"wherein editing is done on a buffered information segment to produce a shortened information segment" "(see For example Figs 7.6, 7.9 and 7.10, here Buffered information segment is encoded (edited) to produce shortened information segment);

"wherein editing is done on the first representation which is a framed version of the buffered information segment to produce shortened information segment" (see For example Figs 7.6, 7.9 and 7.10, here Buffered information segment is encoded (edited) to produce shortened information segment).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Rappaport's teaching, buffering and then editing, so that buffered information segment is produced for editing, to reduce loss of core information to improve efficiency of the system.

As per claims 9, Fujino teaches, "wherein buffering is done the first representation which is a framed version of the information segment to produce a buffered information segment" (col. 25, lines 35-47).

7.   Claims 18-21 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (US 5,436,899) as applied to claims 1 and 27 above, and further in view of Applicant's admitted prior art (Fig. 1).

As per claims 18-21, Fujino does not explicitly teaches:

"wherein the multi-access system is a multi-access wireless system";

"wherein the information segment is transmitted from a mobile station to a base station";

"wherein the transmission resources consist of one or more information channels";

"wherein each information channel is a radio frequency (RF) channel".

However, Admitted prior art teaches:

"wherein the multi-access system is a multi-access wireless system" (Fig. 1, Pages 6-8, TDMA);

"wherein the information segment is transmitted from a mobile station to a base station" (Fig. 1, Pages 6-8);

"wherein the transmission resources consist of one or more information channels" (Fig. 1, Pages 6-8);

"wherein each information channel is a radio frequency (RF) channel" (Fig. 1, Pages 6-8, particularly Page 7, RF transmission resource).

Fujino teaches a statistical multiplexing method (see col. 1, lines 34-54, TDM

multiplexing method for multimedia telecommunication, such as packet network, an

ATM net work "see col. 6, lines 18-29"), however as stated above does not explicitly

teaches a multi-access wireless system, however which is known transmission system

as acknowledges by applicants. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to adapt a wireless telecommunication

for sending information from mobile station to base station using RF transmission

channel known way because to achieve a mobility in the communication sector.

As per claims 31 and 32, they are interpreted and thus rejected for the same

reasons set forth in the rejection of claims 18 and 19, because claims 31 and 32 have

similar scope.

Response to Arguments

8.   In response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See In re Keller, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986).

In Remark section Pages 2-4, the applicant argues the references individually.

9.   The applicant argues at page 4, that detecting silent sections does not equate to

detection of a start of an information segment.

The examiner agrees that the detecting silent section does not equate to

detection of start of an information segment. However, the applicant has misinterpreted

the voice detector (VDET), for example at column 13, lines 59-62, Fijino teaches, "here

calling mode is identified by monitoring the signaling information, the speech/silent

mode is identified by a voice detector (VDET)". Therefore, it is clear that VDET not only

identify silent, but also identify voice.

10.   The applicant argues at page 5, ""wherein the editing and buffering is done to

compensate for transmission allocation resource delays" with respect, the Examiner has

not even addressed this claim feature of claim 1, and Applicant submits that this feature

is not disclosed by the cited references. In particular, as discussed above the Fujino et

al. reference has nothing to do with transmission resource allocation delays and

therefore has nothing to do with compensating for transmission resource allocation

delays. With regard to the Kanerva et al. reference, as discussed above what is being

allocated are subchannels; however, there is no disclosure of any editing and buffering

being done to compensate for allocation delays in providing the subchannels. In both

references there is no concept of resource allocation delays. As such, there can be no

disclosure of any editing or buffering being done to compensate for transmission

resource allocation delays. Furthermore, as discussed above, the Examiner has

equated the "second representation" with packets that are outputted to a packet

network side through a speed difference absorption buffer 142. However, there is no,

disclosure of these packets being buffered to compensate for transmission-allocations

delays, and such, the above equivalence is inappropriate".

The examiner has addressed this claim limitation in the Office Action mailed on November 19, 2003, the examiner regards that because of a typographical mistake the limitation is not addressed in the Office Action mailed on August 4, 2004. However, Fujino teaches, the limitation "wherein the editing and buffering is done to compensate for transmission allocation resource delays" at col. 34, lines 46-65, shows a total delay time is reduced. It is inherent that both "multiplexing" and "multiple access" refer to the sharing of a fixed communication resource (see Sklar, Page 476). Here, Fujino teaches at Fig. 55B allocated channel (recourse) from all channels. Therefore, total delay time is included the channel allocation delays. Fujino also teaches TDM and statistical multiplexing method (col. 1, lines 13-44). Here, in the rejection Kanerva used to show a channel or resource allocation in a multiple access environment. The examiner equate the "second representation" with buffered edited packet signal, and editing is done by redundant bits and/or silence part, discarding or compressing; and at col. 25, lines 12-48 shows a buffering after the multiplexing (see the rejection). Fujino teaches at col. 34, lines 1-31, buffer the multiplexed signal to compensate the delay.

Therefore, in view of above response, the examiner has met his burden with regards to the first criterion in order to establish a case of *prima facie* for obviousness.

11.   In response to applicant's argument that, "the Examiner is suggesting a modification to the Fujino et al. reference stating advantages as motivation to combine the references; however, the modifications proposed do not bring about the advantages stated", the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for

patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*,

227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time
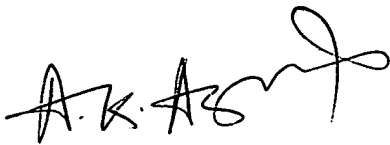
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact Information

13.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ABUL K. AZAD whose telephone number is (571) 272-

7599. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, RICHEMOND DORVIL can be reached on (571) 272-7602. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

ABUL K. AZAD
Primary Examiner
Art Unit 2654

April 15, 2005